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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,809

02/05/2004

Kazuya Fujita

60803(49381)

8452

7590 07/23/2007
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EXAMINER

LOUIE, WAI SING

ART UNIT	PAPER NUMBER
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2814

MAIL DATE	DELIVERY MODE
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07/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/773,809

Applicant(s)

FUJITA ET AL.

Examiner

Wai-Sing Louie

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16,30-38 and 48-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16,30-38 and 48-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/15/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16, 30-38, and 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (US Pub. 2003/0123779) in view of Beyne et al. (US 6,566,745).

With regard to claims 1, 6, and 11, Hashimoto discloses an optical device (paragraph [0026] et seq. and fig. 8) comprising:

- A solid state image pickup device 50 having an effective pixel region 14 in one surface (paragraph [0085] and fig. 2);
- A light-transparent cover 32 arranged opposite to the effective pixel region 14 and having planar dimensions smaller than those of the solid-state image pickup device 50 (paragraph [0088] and fig. 4a);
- An adhesive section 36 for adhering the solid state image pickup device 14 and the light-transparent cover 32 (paragraph [0089] and fig. 4a);
- Connection terminals 26 disposed on the solid state image pickup device 50, the adhering section 36 disposed at least in a portion of a region where the cover opposes the pickup device 14 and such that the connect terminals 26 are exposed (fig. 5a).

- Hashimoto does not disclose a space is formed between the effective pixel region and the light-transparent cover. However, Beyne et al. disclose a space between the effective pixel region 52 and the light-transparent cover 51 (Hashimoto fig. 5i). Beyne et al. provide a motivation to combine with Hashimoto, which is the space between the effective pixel region and the light-transparent cover could be used for the wire bonding of the effective pixel region to the chip I/O pads (Beyne col. 7, lines 38-42). Thus, it would have been obvious at the time the invention was made to modify Hashimoto's device with the teaching of Beyne et al. to provide a space between the effective pixel region and the light-transparent cover in order to use the space for the wire bonding of the effective pixel region to the chip I/O pads.

With regard to claims 2, 8, 10, 12, and 48, Hashimoto discloses the adhering section 36 contains photosensitive (resin) adhesive (paragraph [0089]).

With regard to claims 3-5, 9, 13-15, 35, and 51, Hashimoto discloses a space is formed between the effective pixel region 14 and the light-transparent cover 32 (fig. 4a), and where the adhering section 58 is formed outside effective pixel region 14 in the one surface of the solid state image pickup device 50 sealing the outer periphery of the space (fig. 8).

With regard to claim 7, Hashimoto discloses the light-transparent plate 30 is divided so as to form light-transparent covers 32 each having planar dimensions smaller than those of the solid-state image pickup device 14 (fig. 3b).

With regard to claim 16, in addition to the limitations disclosed in claims 1, 6, and 11 above, Hashimoto also discloses:

- A lens retainer 74 for retaining the lens 78 (fig. 9);
- The light-transparent cover is arranged opposite to the lens and inside the lens retainer (fig. 8 and fig. 10).

With regard to claim 30, in addition to the limitations disclosed in claims 1, 6, 11, and 16 above, Hashimoto also discloses:

- A wiring board 62 on which wiring 54 is formed (paragraph [0109] and fig. 8).

With regard to claims 31 and 38, Hashimoto discloses the optical path-defining unit 70 retains a lens 78 arranged opposite to the light-transparent cover 32 of the solid-state image pickup device 50 (fig. 9).

With regard to claims 32 and 36-37, in addition to the limitations disclosed in claims 1, 6, 11, 16, and 30 above, Hashimoto also discloses:

- A solid state imaging module component (fig. 8) formed by resin-sealing 58: a module component wiring board 62 on which wiring 54 is formed (fig. 8);
- The solid-state image pickup device 50 is electrically connected to the wiring 54 in a state that the surface of the light-transparent cover 32 is exposed (fig. 8).

With regard to claim 33, Hashimoto discloses an external terminal 60 connected to the wiring 54 on the surface of the module component wiring board 62 reverse to the surface to which the imaging device 50 is adhered (fig. 8).

With regard to claim 34, Hashimoto discloses the external terminal has a protruding shape (fig. 8).

With regard to claim 49, Hashimoto discloses the adhering section 36 contains photosensitive (thermoplastic photosensitive resin) adhesive (paragraph [0089]).

With regard to claim 50, Hashimoto discloses the light-transparent cover 30 is planar (fig. 3a and 3b).

Response to Arguments

Applicant's arguments filed 6/15/2007 have been fully considered but they are not persuasive.

- Applicant argues that Hashimoto does not disclose no gap provided between the adhesive layer 36 and the optical region 14. However, Beyne et al. disclose such a gap between the effective pixel region and the light-transparent cover. The combination of Hashimoto and Beyne et al. meet the amended independent claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

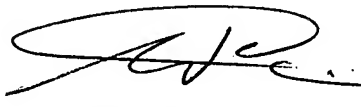
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



WAI-SING LOUIE
PRIMARY PATENT EXAMINER

Wsl
July 18, 2007.